

Pinus ponderosa / Juniperus communis Woodland

COMMON NAME	Ponderosa Pine / Common Juniper Woodland
SYNONYM	Ponderosa Pine/Common Juniper Woodland
PHYSIOGNOMIC CLASS	Woodland (II)
PHYSIOGNOMIC SUBCLASS	Evergreen woodland (II.A)
PHYSIOGNOMIC GROUP	Temperate or subpolar needle-leaved evergreen woodland (II.A.4)
PHYSIOGNOMIC SUBGROUP	Natural/Semi-natural (II.A.4.N)
FORMATION	Rounded-crowned temperate or subpolar needle-leaved evergreen woodland (II.A.4.N.a)
ALLIANCE	<i>Pinus ponderosa</i> Woodland Alliance

CLASSIFICATION CONFIDENCE LEVEL 2

USFWS WETLAND SYSTEM Upland

RANGE

Globally

This community is found in eastern Montana, the Bighorn Mountains in northern Wyoming and the Black Hills of western South Dakota and eastern Wyoming.

Wind Cave National Park

Ponderosa pine/common juniper vegetation is uncommon at Wind Cave NP, and is restricted to the western part. It is more common to the west on Forest Service lands.

ENVIRONMENTAL DESCRIPTION

Globally

This community is most often found on moderate north and west facing slopes (Hansen and Hoffman 1987, Hoffman and Alexander 1987, Hoffman and Alexander 1976). The soils are shallow and loamy. They develop from limestone or igneous rock.

Wind Cave National Park

Stands of ponderosa pine/common juniper are best developed on moderately-steep to steep slopes with northerly aspects. Mappable stands are found only in the western part of the Park, which is underlain by granitic rocks. This community becomes more common to the west on National Forest lands.

MOST ABUNDANT SPECIES

Globally

<u>Stratum</u>	<u>Species</u>
Tree canopy	<i>Pinus ponderosa</i>
Tree sub-canopy	<i>Pinus ponderosa</i>
Short shrub	<i>Juniperus communis</i>
Herbaceous	<i>Carex inops</i> ssp. <i>heliophila</i>

Wind Cave National Park

<u>Stratum</u>	<u>Species</u>
Tree canopy	<i>Pinus ponderosa</i>
Short shrub	<i>Juniperus communis</i> , <i>Prunus virginiana</i>
Herbaceous	<i>Carex inops</i> ssp. <i>heliophila</i> , <i>Danthonia spicata</i>

CHARACTERISTIC SPECIES

Globally

Achillea millefolium, *Juniperus communis*, *Mahonia repens*

Wind Cave National Park

Pinus ponderosa, *Carex inops* ssp. *heliophila*

VEGETATION DESCRIPTION

Globally

USGS-NPS Vegetation Mapping Program
Wind Cave National Park

This community is dominated by *Pinus ponderosa* in the overstory. Other tree species that may be present are *Picea glauca* and *Populus tremuloides*. The canopy is usually moderately closed but can become nearly closed in stands that are not disturbed for long periods. There is a prominent low shrub layer whose most abundant component is *Juniperus communis*. This species covered an average of 25% (range of 4-42%) in 7 stands in the Black Hills of South Dakota and Wyoming (Hoffman and Alexander 1987). Total average cover by the shrub layer was 51% and by the herb layer was 8%. Other shrub species found in this community across its range are *Arctostaphylos uva-ursi*, *Mahonia repens*, *Spiraea betulifolia*, and *Symphoricarpos albus*. Typical herbaceous species are *Achillea millefolium*, *Carex inops* ssp. *heliophila*, *Schizachyrium scoparium*, *Fragaria* spp., and *Lathyrus ochroleucus* (McAdams et al. 1998).

One site of this community in the Black Hills was reported to have significant *Pinus flexilis* in it (Thilenius 1970).

Wind Cave National Park

Stands of ponderosa pine/common juniper are characterized by high canopy coverage, with ponderosa pine cover often greater than 75%. A subcanopy of smaller pines may be present. The understory usually is sparse. Common juniper is present but not abundant, with shrub cover usually less than 20%. Codominants may include chokecherry (*Prunus virginiana*), ninebark (*Physocarpus monogynous*), snowberry (*Symphoricarpos albus*) and/or currants (*Ribes* spp.). Herbaceous cover typically is very sparse, often less than 5%. Poverty oatgrass (*Danthonia spicata*) and sunsedge (*Carex inops* ssp. *heliophila*) are the most consistently occurring species.

OTHER NOTEWORTHY SPECIES

CONSERVATION RANK G4?

DATABASE CODE C EGL000859

MAP UNITS

The ponderosa pine/common juniper community is one of the types included in map units 45 and 48, ponderosa pine woodland complex I and II, on the Wind Cave vegetation map. It is not mapped separately. Stands of dense young doghair are mapped as 49, young ponderosa pine dense cover complex.

COMMENTS

Wind Cave National Park

Ponderosa pine/common juniper appears to have become established where lack of disturbance has allowed dense pine canopy to develop. The ponderosa pine/common juniper type grades into the ponderosa pine/chokecherry type. Some stands were found that included significant amounts of both common juniper and chokecherry, making classification difficult. Dense stands of young pine are occasionally present. These young doghair stands are mapped separately on the Wind Cave vegetation map.

Ponderosa pine/common juniper vegetation is uncommon at Wind Cave NP, and only a few stands were surveyed.

REFERENCES

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